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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,122	10/21/2003	Mark A. Mochring	500581.08 (29666/US/2)	5347
27076 7590 03/19/2007 DORSEY & WHITNEY LLP INTELLECTUAL PROPERTY DEPARTMENT SUITE 3400 1420 FIFTH AVENUE SEATTLE, WA 98101			EXAMINER JAWORSKI, FRANCIS J	
			ART UNIT 3768	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/19/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/691,122

Applicant(s)

MOEHRING ET AL.

Examiner

Jaworski Francis J.

Art Unit

3768

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 87 - 124 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 87 - 124 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/12/6, 11/7/5, 5/3/4</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Claims 87 – 124 are present for examination after the election response without traverse filed on February 5, 2007. Remaining claims have been cancelled without prejudice.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 87, 94 - 95, 102 - 103, 108, 110 – 113, 120 – 121 and 124 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vilkomerson et al (US 5669388 ) in view of Spratt (US5724973). The former evidences that it was known to provide a structure for and a method to search for a (Doppler) strongest signal strength using an ultrasound transmitter and receiver operation in conjunction with a control processor in either single transducer or subarray processing modes in association with the strongest signal pattern recognition. While Vilkomerson et al does not specifically recite that the control processor is a computer, it would have been obvious in view of Spratt to use a host processor computer to effect a generic Doppler measurement system such as by substitution for 70 in the former, in order to effectively treat the algorithm protocols described therein.

Claims 88 – 89, 96 – 97, 104 – 105, 114 - 115 are rejected under 35

U.S.C. 103(a) as being unpatentable over Vilkomerson et al in view of Spratt as applied to claim 87 above, and further in view of Schiller 6296611 and Powers et al US6471650 insofar as Schiller teaches in Fig. 2 that strongest signal detection may extend to area arrays whereas the latter teaches that a triangular or hexagonal beam pattern and transducer patch configuration may be used to adequately sample a volume region when area arrays are used to ensonate a region.

Claims 90 – 91, 98 – 99, 106 – 107, 116 - 117 are rejected under 35

U.S.C. 103(a) as being unpatentable over Vilkomerson et al in view of Spratt as applied to claim 87 above, and further in view of Schiller as applied immediately above, and further in view of Friemel US6537220 which teaches that quadrilateral transducer element subsets may alternatively be used to investigate an ensonated volume.

Claims 92 – 93, 100 – 101, 109, 118 – 119 and 122 - 123 are rejected under 35

U.S.C. 103(a) as being unpatentable over Vilkomerson et al in view of Spratt as applied to claim 87 above, and further in view of Hall et al (US 5398216) insofar as the latter teaches that a structure and methodology for directing the energy focus for Doppler measurements may include focusing and delay phasing of the contributing transducer elements.

[ Alternately stated, the examiner is arguing that the heretofore known Doppler-based strongest or optimum signal detector/measurement-positioning systems included use of subarrays and in area configurations (Schiller) as well as a linear strip configuration (Vilkomerson et al), whereupon the use of a computer processor and

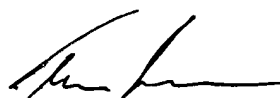
Art Unit: 3768

phasing delay components to steer the ensonating beam and where the subarrays occupy particular shapes were evidenced to have been known in the prior art. ]

Any inquiry concerning this communication should be directed to Jaworski Francis J. at telephone number 571-272-4738.

FJJ:fjj

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Francis J. Jaworski  
Primary Examiner